



## *The Daedalean*

**Semper Discens**

*Monthly Aerospace Education Newsletter of the Connecticut  
Wing of the Civil Air Patrol*

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### **CALENDAR**

#### **April**

12-17 APR-CTWG DC Trip #1-See Article

18-23 APR-CTWG DC Trip #2-See Article

#### **For Future Planning**

31 JUL-07 AUG-CTWG Encampment

12-14 AUG-AEO School-USAF Museum

21 AUG-CTWG Rocket Contest-Tentative

22-24 OCT-CTWG Conference

### **DAEDALEAN ARCHIVE**

An archive of past issues of The Daedalean may be found on the CTWG web-site at:

<http://www.ctwg.cap.gov/aerospace.html>

### **2010 COMMANDER'S CUP WING ROCKETRY CONTEST**

I have been in contact with CATO, the umbrella organization which assists us with the model rocket contest. They cannot assist us in June and

most of July is also a problem. August 21st, a Saturday, is the most favorable date.

3. Here are the final rules:

Flight 1: Tyro Cadets will build an Estes Alpha or Quest Astra 1 decorated in a Civil Air Patrol Theme. The entry will be judged on construction, finish, and flight. Each first year Cadet in a Squadron may enter one rocket. A Tyro Cadet is a Cadet who has never participated in the Wing contest. (CAVEAT-The Alpha is the model with balsa fins. Do not order the Alpha III with plastic fins for this contest.)

Flight 2: Altitude Competition-Build a rocket, kit or scratch, which will use a standard engine which will be supplied by the Wing. This will be the same engine for all and will be either an 1/2A, A, or B engine, all of which have the same dimensions (2.75 in x 0.69 in). Your entry must accept this size engine. Judging will be based on maximum altitude reached. Each Squadron may enter two rockets for one flight each and the best of the two flights will be counted.

Flight 3: Free Form Competition-Each Squadron may enter two scratch built rockets powered by a D engine. Judging will be based on construction, finish, and flight.

Finish points will be based on sanding, contouring of fins, joins of fins to fuselage, and alignment of fins. Finish will be based upon quality of paint application, neatness of decal or marking application, and appropriate markings and colors.

Altitude will be judged on the basis of a number of measurements, the high and low of which will be discarded.

Flight will be judged on a vertical climb, and proper deployment of recovery device.

A scoring rubric will be developed and sent out for comments.

Squadrons are responsible for purchasing rockets, engines, igniters, and wadding except for Flight 2, altitude rockets, in which case, the Wing will supply the engines. CATO will supply launch services.

5. Obtaining Supplies: Here are some suggested websites for information on obtaining rockets, engines, and supplies in bulk. No endorsement is meant or implied by these recommendations.

- A. <http://www.estesrockets.com>
- B. <http://www.questaerospace.com>
- C. <http://www.acsupplyco.com> (offers bulk discounts)/CAP Model Rocketry section

If you have any questions, please contact me.

Steve Rocketto, Raketekampfdirektor

### **CT WING FIELD TRIP TO WASHINGTON**



2009 Trip

*Cadets Cluster for Chow Near Convair at Dover AFB.*

Some Squadrons have indicated interest in participating in another field trip to the Washington, D.C. area. Last year, sixteen Cadets and Officers spent five days visiting aviation museums and historic sites. They billeted at Bolling Air Force Base and traveled in CAP vans.

The trip is now on. In fact, two trips will be scheduled.

Here are tentative plans for this year.

Dates:

Trip #1 Monday, 12 April to Saturday, 17 April

Trip #2 Sunday 18 April to Friday, 24 April

For the trip down, bring a bag lunch which we will eat on the road.

Both trips are scheduled for six days but the start and end time may be adjusted by one day due to availability of Officers to drive and chaperone.

Cost:

The fee is \$125. The money will be paid to your home squadron for deposit. At the end of the trip, costs will be determined and squadrons will be responsible for refunding any balance.

Housing: Bolling AFB Temporary Living Facilities which sleep 4-6.

Food: TLFs at Bolling have kitchen facilities. Most food will be prepared in our quarters.

Clothing: Blues are required in the District of Columbia.

Documentation: CAP ID, Form 60 Medical, Photo ID, CAP Driver's License (drivers)

Transportation:

CAP Van and POV if warranted by participation.

Venue: Possible sites for visits are Army Ordnance Museum Aberdeen Proving Grounds, AMC Museum Dover AFB, National Cryptologic Museum and Vigilance Park, National Archives, Washington Mall, National Air and Space Museum Mall and Annex, Washington Navy Yard,

USMC Museum Quantico, National Rifle Museum, Patuxent River Naval Air Museum, Goddard Space Flight Center, Harper's Ferry National Park, and Fort McHenry and USS Constellation Baltimore. Suggestions are welcome.

#### Present Status of Trips:

Trip#1-Two Officers and 13 Cadets have expressed interest. (one van and one pov)

Trip #2-Two Officers and seven Cadets have expressed interest (one van)

In order to complete planning, the cut-off day for signing up is Saturday, 27 March. On 28 March, I will notify all interested parties via email that they must make a financial commitment.

We would like some more Officer volunteers to accompany us. You need not stay for the entire period but if not, you must drive down at your own expense. If you can only stay for part of the time, we will prorate the fees.

### AVIATION CURRENT EVENTS AND HISTORY MILEPOSTS

#### Current Events

NASA completed its second drop test of an MD-500 helicopter in a series of experiments designed to better understand its crash response in order to provide data for improving the safety features of rotorcraft.

The test vehicle is equipped with 160 channel data recorders and are "manned" by four anthropomorphic dummies, one of which is fully outfitted with simulated internal organs. The flight path is approximately 33 degrees to the

ground and from a height of 35 feet, generates impact velocities of 33 mph horizontally and 48 ft per second vertically.

In the first test, the vehicle was equipped with a honeycomb foam to cushion the crash. As the foam collapses, it extends the time of the impact, thereby decreasing the deceleration and reducing the forces on the airframe and passengers. Very little damage occurred in this first test.

In the second test, the foam was removed and the MD-500 was dropped. The gear collapsed, the windshield cracked, and the data recovered from the sensors in the dummies indicated that humans would have suffered potentially fatal injuries. G forces were triple that of the initial test.

#### History Milestones

02 APR, 1959-NASA names the seven Project Mercury astronauts.

05 APR, 1968-Flt. Lt. Alan Richard Pollock flies his Hawker Hunter between the spans of London's Tower Bridge.



*Former Swiss Hunter at RCAF Museum*

06 APR, 1927-The Aeronautics Branch of the Department of Commerce issues Pilot's License #1 to William P. McCracken.

15 APR, 1952-First flight of Boeing YB-52 Stratofortress.

17 APR, 1941-A float equipped VS-300A piloted by Igor Sikorsky makes the first water landing by a helicopter.

21 APR, 1951-First flight of Chase XC-123A, the first US jet transport.

### **HISTORY MINI-ARTICLE #1**

On April 5th, we celebrate the 42nd anniversary of Flight Lieutenant Alan Richard Pollock's flight between the spans of London's Tower Bridge.

Flying under bridges has been a advocacy of aviators since the dawn of powered heavier than air flight. Chronicles of World War I record a number of instances of this practice and given the average life span of an aviator in The Great War, ducking under a bridge was probably fairly low on the scale of dangers which they faced from combat and engine and airframe failure.

Certainly the most remarkable flight under bridges was that performed by Squadron Commander Christopher Draper, a World War One Ace. Draper logged a number of flights under bridges but his most spectacular performance occurred on May 5th, 1953. Out of work and seeking to prove his worth, he rented a 100 HP Auster at the Herts and Essex Airplane Club and headed for London and Thames. He missed his first target, Blackfriars Bridge, but at 80 knots, slaloming around the water traffic, he managed to fly under 15 of the next 17 bridges, all offering clearances between the span and the water of between 40 and 50 feet.



*Auster Landing at Duxford*

He eschewed passage under Hungerford, Barnes, and Kew Bridges because "the rising tides were tricky" and he "did not want to any risks," a statement which, when taken a face value, indicates his prudent and conservative flying style.

The phlegmatic British judicial system charged him with eight counts of dangerous flying and he was ordered to pay a ten guinea fine.

The wheels of the British Civil Aviation Authority grind slow but they grind exceedingly fine. Eleven years later, in 1964, they revoked his license. He closed his logbook on 17,000 hours and 73 different types.

The Mad Major went West on 16 January, 1979. Perhaps it is the romantic in me but I like to think that on his final flight, as he passed over the United States, he might have spotted the St. Louis Arch and....

### **HISTORY MINI-ARTICLE #2**

The 49th anniversary of the first flight of the Chase XC-123A on 21 April brings to mind some fascinating facts about this remarkable airframe. After the Bolshevik Revolution, many Russian emigres contributed to development of aircraft in the United States. The most well known are Igor Sikorsky, primarily associated with the development of the helicopter and Alexander Seversky, airpower advocate and developer of a line of fighters culminating in the Republic P-47 Thunderbolt. A lesser known figure is Mikhail Mikhailovich Strukov, anglicized to Michael Strukoff whose associated with Chase and Fairchild Aircraft resulted in the creation of the only airframe to fly as a glider, prop, composite, and jet powered aircraft as well as a land plane, seaplane, and skiplane!

In World War II, Strukoff and Chase constructed some all metal gliders which carried the sobriquet "Avitruk." The XCG-20 was the assault transport result. As the YC-122, the aircraft was provided with two engines in removable nacelles so it could be switched between a powered or a glider configuration.

The XG-20 glider version was equipped with four General Electric J-47 jet engines housed in pairs in two B-47 pods to become the first US jet transport.



With two Pratt & Whitney Double Wasps, the classic C-123 Provider design emerged and was adopted by the USAF. It featured a low, square fuselage with internal tread ways and a large aft hatch and ramp to facilitate cargo handling.



*USCG C-123 Used to Service Remote LORAN Sites*

As is the case, the '123 was underpowered and eventually, turbines were slung outboard of the reciprocating Pratts to create a four engine composite power setup.

But that was not the end of the airframe tinkering. Project Pantobase added a hydroski, sealed fuselage, and wing mounted pontoons which allowed the aircraft to operate off water. or snow as well as land. As a final touch, the aircraft flew with boundary layer controls. Air blown onto the upper surface of the wing reduces drag and improves slow speed performance.

So ultimately this versatile airframe operated in the following modes: glider, switchable glider/twin reciprocating power, twin reciprocating power, four engine jet, four engine composite power, land plane, sea plane, ski plane and STOL plane!!!!

### **KRAZY CAPTION CONTEST**

The last *Coastwatcher*, The Thames River Composite Squadron weekly newsletter, ran the following contest

A prize was awarded to the Cadet or Officer who suggests the best caption for the picture. A sample caption, somewhat long-winded, was offered. The sample will give you some background information to assist you in formulating a hopefully shorter, caption.

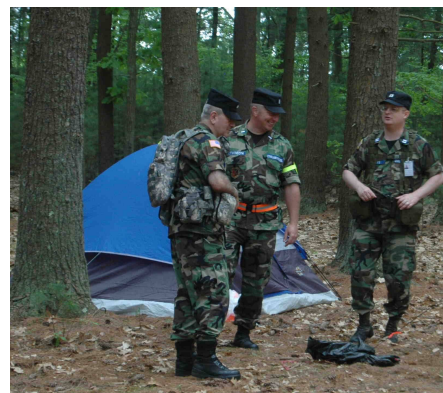
LtCol Lief Bergey (formerly a US Navy Commander and P-3 Orion pilot flying antisubmarine missions over vast stretches of ocean) is confused by the topography and asks, "Are we here near Brainard or here, near Montauk Point?" 2Lt Giancarlo Dell'Orco (formerly a *Sottotenente di Vascello* in the *Aviazione Navale Italiana*) replies, "It makes no difference. All roads lead to Rome."

The winning caption was submitted by the CTWG IG, LtCol Stidsen who will be awarded a jack knife when the Puzzle Master next crosses his path



*"In the P-3 , we could fly this far before the coffee ran out"*

Here is the next picture which demands a caption. Perhaps Capt Palys is saying something that makes our new Vice Commander smile? What is that object on the ground that is attracting their attention? The options are open.



Now it is your turn! Send entries to *Primero Capitano* Rocketto. For special consideration, entries should be written on the back of a \$20 gift certificate to Vocatura's Bakery in Westerly.

## **GUEST ARTICLE**

*Mrs. Rachael Manzer is a CAP Aerospace Education Member. She has been nominated National Aerospace Education Teacher of the Year Honors endorsed by CTWG*

### **The Dawn of a New Space Age**

By

Rachael Manzer

Suffield Public Schools Science Coach and  
Pathfinder 7 Commercial Teacher Astronaut

We are at the dawn of a new space age. A time period where the question will not be “*Can I go to space?*” but rather “*How many times can I go?*” Commercial space companies like Virgin Galactic and XCOR are gearing up to send people into space in the near future. In fact, Virgin Galactic has “over 300 reserved tourism customers representing more than \$40 million of deposits, and an additional 85,000 expressions of interest.” Virgin Galactic’s spacecraft, *Enterprise*, is based upon a prototype that has already flown in space called SpaceshipOne, the winner of the X-Prize. XCOR’s LINX is a piloted, two seated reusable launch vehicle. The Lynx can fly up to four flights per day by having a fast two hour turn around between flights. New spaceports, from where these commercial spacecraft will launch, are being built at various locations around the globe. Space will no longer be reserved for a few, but instead will be available to everyone. So let’s go fly.

For more information go to:

Virgin Galactic

HYPERLINK "<http://www.virgingalactic.com/>"

XCOR

HYPERLINK "<http://www.xcor.com/>"

New Mexico Spaceport

HYPERLINK

"<http://www.spaceportamerica.com/>"

<http://www.spaceportamerica.com/>

Mojave Air and Spaceport

HYPERLINK "<http://www.mojaveairport.com/>"

<http://www.mojaveairport.com/>

### **GONE WEST**

Robert M White, Maj. Gen., USAF (ret'd.) took his final flight on St. Patrick's Day.



General White holds the distinctions of being the first man to fly at Mach 4, Mach 5, and Mach 5 and the first USAF member to be awarded Astronaut Wings for exceeding 50 miles in altitude, all flights achieved in the North American X-15.

White, a New York City native, entered the service in 1942. His combat career ended on this 52nd mission when his Mustang was shot down over Germany.

In 1954, White graduated from the Air Force's Experimental Test Pilot School. He was selected for the X-15 program and flew 16 of the 199 flights.

During the Vietnam War, Gen. White flew 70 combat missions in Republic F-105s and was awarded the Air Force Cross.

His last tour of duty was as Commander of the Air Force Flight Test Center at Edwards Air Force Base from where he retired in 1961.